CLAIMS

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is as follows:

1. A method of filtering a datastream containing transport table sections, said method comprising steps of

determining presence of transport table sections in a payload portion of a packet of said datastream from a packet ID field in a header of said packet,

filtering a portion of said transport table sections in accordance with a mask which defines a filter function and a logic state of a not match bit to provide a compare result,

selecting a next mask and a portion of said transport table sections in accordance with a filter ID, and

combining compare result values in accordance with a logic values of not match bits in a not match indication register,

whereby an arbitrary length of said transport table sections are filtered by an arbitrary number of filters having arbitrary filter functions.

2. A method as recited in claim 1, wherein said filter ID is implemented in a control word.

3. A method as recited in claim 2, wherein said Filter ID includes a section filter ID and a next filter ID.

4. A method as recited in claim 1, wherein said combining step includes ANDing or ORing compare result values of a bit or over a group of bits in accordance with logic values of not match bits corresponding to sad bit or group of bits.

5. A method as recited in claim 4, wherein said combining step further includes the step of

accumulating a matchword over a plurality of blocks of filtered data.

6. A method as recited in claim 5, wherein said step of accumulating a matchword is performed by

ANDing a current matchword bit with a corresponding bit of a previous matchword if the filtering applied to the current block is positive or mixed filtering, and

ORing a current matchword bit with a corresponding bit of a previous matchword if the filtering applied to the current block is negative filtering

in accordance with said contents of said not match indication register.

7. A method as recited in claim 5, wherein said step of accumulating a matchword is performed in accodance with logic functions specified by at least one extra bit.

8. A method of filtering a datastream, said method comprising steps of

filtering a portion of said datastream in accordance with a logic state of a not match bit and a Filter ID to provide a compare result, and

combining compare result values in accordance with a logic values of not match bits in a not match indication register corresponding to said portion,

whereby an arbitrary length of said datastream is filtered by an arbitrary filter function.

9. A method as recited in claim 8, wherein said filter ID is implemented in a control word.

10. A method as recited in claim 9, wherein said Filter ID includes a section filter ID and a next filter ID.

11. A method as recited in claim 8, wherein said combining step includes ANDing or ORing compare result values of a bit or over a group of bits in accordance with logic values of not match bits corresponding to sad bit or group of bits.

12. A method as recited in claim 11, wherein said combining step further includes the step of

accumulating a matchword over a plurality of blocks of filtered data.

13. A method as recited in claim 12, wherein said step of accumulating a matchword is performed by

ANDing a current matchword bit with a corresponding bit of a previous matchword if the filtering applied to the current block is positive or mixed filtering, and

ORing a current matchword bit with a corresponding bit of a previous matchword if the filtering applied to the current block is negative filtering

in accordance with said contents of said not match indication register.

14. A method as recited in claim 12, wherein said step of accumulating a matchword is performed in accodance with logic functions specified by at least one extra bit.